

Sorghum Grits, Soy-Fortified

This processed commodity is generally used for emergency programs, and where sorghum is a local staple food, for other categories.

1. NUTRITIONAL VALUES (per 100 g)

These are average values, taken from the U.S.

Department of Agriculture, Agricultural Research Service (USDA:ARS) 1998 USDA Nutrient Database, Release 12, Laboratory Home Page,

(<http://www.nal.usda.gov/fnic/foodcomp>). These nutrient values are provided as a guide for use in the calculation of food aid rations; users should be aware that shipments of food aid may vary from these exact values. The values for thiamin, riboflavin, niacin, vitamin A, calcium and iron represent the minimum levels of enrichment nutrients (converted to a 100 g basis) as listed in Specifications below.

2. COMPONENTS

85% Sorghum Grits: Sorghum Yellow or white grain sorghum which has seedcoat, hulls, and germ removed.

15% Soy Beans: Cracked, dehulled, defatted and toasted, (or expeller) processed from selected soybeans.

3. SPECIFICATIONS

Class: Yellow or white grain sorghum as defined by "Official United States Standards for Grain," revised February 1970, pages 6.1-6.4, except that the grain must contain no more than 2% of kernels having brown subcoats.

Grade: US No. 1, US No. 2, or US No. 3, if downgraded because of moisture only.

Other: The grain must be thoroughly cleaned to remove stones, sticks, trash, weed seeds, and shriveled kernels; dehulled; degermed; and reduced to grits. The sorghum must be milled to remove seed coat so that the product color and general appearance will be that of typical sorghum grits which are reasonably well-milled. (See Table next page.)

Nutrient	Amount	Unit
Water	8.9	g
Energy	337.2	Kcal
Protein	17.3	g
Total Lipid	3.0	g
Carbohydrate	68.5	g
Fiber, total dietary	n/a	g
Ash	2.3	g
Calcium	110	mg
Iron	2.90	mg
Magnesium	n/a	mg
Phosphorus	345	mg
Potassium	655	mg
Sodium	8.1	mg
Zinc	n/a	mg
Copper	n/a	mg
Manganese	n/a	mg
Selenium	n/a	mcg
Vitamin C	0	mg
Thiamin	0.44	mg
Riboflavin	0.26	mg
Niacin	3.53	mg
Pantothenic acid	n/a	mg
Vitamin B-6	n/a	mg
Folate	150	mcg
Vitamin B-12	0	mcg
Vitamin A	2205.00	IU
Vitamin E	0.0	mg-ATE
Vitamin D	n/a	IU
Iodine	n/a	mcg

4. PACKAGING

25 kg (55 lb.) multi-wall paper bags. Three plies of paper (minimum) with an inner polyethylene plastic liner. The outer paper ply is treated to provide wet strength.

5. SHELF LIFE

At least one year. See "Section III: Storage/Shelf Life Specifications" for more information.

CHEMICAL AND PHYSICAL REQUIREMENTS

ITEM	REQUIREMENT ¹	
	Minimum	Maximum
Moisture, %	--	13.5
Protein (Nx6.25), % ²	15.0	--
Crude Fat, % ²	--	2.0
Ash, % ²	--	³
Crude Fiber, % ²	--	2.1
Total bacterial count per gram ⁴	--	50,000
Material that will pass through a U.S. Standard No. 8 woven-wire-cloth sieve, %	90.0	--
Material that will pass through a U.S. Standard No. 14 woven-wire-cloth sieve, %	--	35.0
Material that will pass through a U.S. Standard No. 30 woven-wire-cloth sieve, %	--	5.0

¹ All percentages are on the basis of weight.

² These limiting values are on a moisture-free basis.

³ For maximum ash see Table on "Maximum Ash Allowable Without Discount at Specified Calcium Levels" (paragraph 9.D) in USDA Specifications.

⁴ Bacterial plate count in excess of 50,000 per gram will constitute rejection. However, at contractor's request only, the following additional requirements will apply: If the bacterial plate count is higher than 50,000 per gram but not more than 500,000 per gram, product will be rejected, unless coliform count does not exceed 100 organisms per gram of product. If the bacterial plate count is higher than 500,000 per gram but not more than 1,000,000 per gram, product will be rejected, unless the product is proved to contain:

1. No more than 100 coliform per gram.
2. No more than 10 staph aureus per gram.
3. No salmonella in 20 grams of product.

If bacterial plate counts higher than 1,000,000 organisms per gram, product will be rejected. Cost of additional testing required for acceptance of product having plate counts in excess of 50,000 per gram will be for contractor's account.

ENRICHMENT INGREDIENTS	Minimum	Maximum
Thiamine, mg/lb.	2.0	3.0
Riboflavin, mg/lb.	1.2	1.8
Niacin or niacinamide, mg/lb.	16.0	24.0
Iron (reduced iron, 325 mesh to be used as the iron source), mg/lb.	13.0	26.0
Vitamin A Palmitate, IU/lb.	10,000	12,000
Calcium (in harmless and assimilable form), mg/lb.	500	750

(Source: USDA:FSA:PDD:EOB January 12, 1998. Contact 202-690-3565;
SFSG9: PURCHASE OF SOY-FORTIFIED SORGHUM GRITS FOR USE IN EXPORT PROGRAMS –
SPECIFICATIONS)